

**Site:** The project covers an area of 3,170 km<sup>2</sup> on the border zone between the department of San Marcos, Guatemala, and the State of Chiapas, in Mexico. The region lies between the watersheds of the Suchiate River, forming most of the frontier between the two countries, and the Coatán River, which arises in Guatemala and then goes into Mexican territory.

**Project:** "Integrated Management of Watersheds Associated with the Tacaná Volcano Guatemala-Mexico," started in 2003 within the framework of the IUCN Water and Nature Initiative. The main goal of the project was to reverse environmental degradation and especially the degradation of the watersheds, which are of great strategic

importance for both countries since they supply water to a large number of residents in the cities located in the lower areas and the main source of irrigation for agricultural and livestock purposes. By restoring them the risk of devastating floods is also significantly reduced.

**Threats:** Along with climate change and environmental degradation, severe soil erosion has reduced the capacity of the watersheds to hold water. Pressure on water resources is increasing rapidly as the population in the area grows and degradation of the environment has limited people's livelihood options. Communities are increasingly vulnerable to flooding caused by tropical storms and hurricanes. In 2005 tropical storm Stan dropped torrential

## DISASTER RISK REDUCTION CASE STUDY

rains in the region, causing flooding and mudslides that led to an estimated 2,000 deaths and damages of up to US\$ 40 million. Roads, bridges, water supply systems, crops and local economies were destroyed.

**Objectives:** Enable integrated management of water resources, soils and other ecosystems, restoration of the natural infrastructure; ensure that local authorities and the people dependant on the natural resources have the tools and information to prepare and execute water resource management plans.

**Results:** With the support of IUCN's Water and Nature Initiative and other organizations, local communities organized themselves into 'micro-watershed councils' to coordinate watershed management among groups of villages. Driven by the need to reduce poverty by increasing their livelihoods, these community councils have led to diversification of farming systems, including terracing of degraded slopes and reforestation through the introduction of agroforestry. Communities are investing their labour

and capital in restoration of natural infrastructure and are becoming better equipped to adapt to climate change and less vulnerable to severe storms.

**Why it worked:** IUCN worked directly with local organizations and initiated alliances between local groups implementing the numerous pilot projects in the area order to create knowledge-sharing networks. People have become aware of the effects of unsustainable environmental management. They have identified the different demands on water and defined priorities for managing and restoring watersheds that respond to their development needs.

**Contacts for more information:**

Ms. Rocio Cordoba, Coordinator  
Water Programme Coordinator  
IUCN Mesoamerica  
[rocio.cordoba@iucn.org](mailto:rocio.cordoba@iucn.org)

## LOCATION

### INTERNATIONAL UNION FOR CONSERVATION OF NATURE

IUCN, the International Union for Conservation of Nature, helps the world find pragmatic solutions to our most pressing environment and development challenges by supporting scientific research; managing field projects all over the world; and bringing governments, NGOs, the UN, international conventions and companies together to develop policy, laws and best practice.

The world's oldest and largest global environmental network, IUCN is a democratic membership union with more than 1,000 government and NGO member organizations, and almost 11,000 volunteer scientists and experts in some 160 countries. IUCN's work is supported by over 1,000 professional staff in 60 offices and hundreds of partners in public, NGO and private sectors around the world.